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With Respect to
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REPORT

OF THE

INSPECTOR OF BUILDINGS,

FOR THE YEAR 1872.



BOSTON:

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CITY OF BOSTON.



REPORT

OF THE

INSPECTOR OF BUILDINGS,

FOR THE YEAR 1872.

8/3/26/37



CITY OF BOSTON.

OFFICE OF THE INSPECTOR OF BUILDINGS, }
CITY HALL, January 1, 1873. }

To the Honorable the City Council of the City of Boston:—

GENTLEMEN,—In compliance with the requirements of the statute under which this department was formed, I herewith submit a report of its proceedings for the year ending December 31, 1872.

PERMITS.

All persons erecting new or altering old buildings, in any part of the city, are required by law to first obtain a permit therefor from the Inspector of Buildings.

NUMBER OF PERMITS ISSUED.

For buildings of brick and stone,	419
“ wooden and frame buildings,	685
“ repairs, alterations and additions,	841
Total,	1,945

BRICK AND STONE BUILDINGS.

Number of brick and stone buildings erected, or in process of erection under permits issued, 973

Classified as follows, viz.:—

BANKING AND PUBLISHING,	1
BREWERIES,	3

The following statement will show the Wards in which the foregoing buildings are situated, and the number in each Ward :—

<i>Wards.</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	<i>Total.</i>
Banking and Publishing	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
Brewery . . . . .	.	.	.	.	.	.	.	.	.	.	2	.	.	1	.	.	3
Car Houses . . . . .	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
Charitable Institutions .	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	2
Churches . . . . .	.	.	.	.	.	.	1	.	1	.	.	1	.	1	.	.	4
Dwelling Houses . . .	4	2	4	.	.	58	8	.	97	14	52	54	12	67	230	45	647
Dwelling Houses and Stores	3	2	.	.	2	.	2	3	10	9	3	1	1	19	20	.	75
Express Offices . . . . .	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Family Hotels and Tenement Houses	1	3	.	.	1	2	2	7	9	4	.	3	1	1	.	.	34
Gas Manufacturing . .	1	2	.	.	.	.	.	.	.	.	.	.	1	.	.	2	6
Hotels . . . . .	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Iron Foundry . . . . .	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1
Manufacturing . . . . .	.	.	.	.	.	.	.	.	.	1	.	.	2	.	1	.	4
Mechanical	3	2	.	1	.	.	3	.	2	8	1	3	.	.	.	.	23
Mercantile	1	.	13	85	.	.	.	.	.	.	.	.	.	.	.	.	99
Private Billiard Room .	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
Private School-house .	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
Public Buildings . . . . .	.	.	.	1	.	.	.	.	.	.	2	.	1	1	2	7	
Railway Stations . . . . .	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	2
Restaurant . . . . .	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
Stables . . . . .	.	.	.	.	1	.	.	4	2	.	4	2	8	4	1	.	26
Storage	1	2	.	.	.	.	.	.	.	.	.	.	.	2	.	.	5
Stores and Offices . . .	1	3	.	3	4	.	.	2	2	.	.	.	1	1	.	1	18
Stores and Workshops .	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
Sugar Refinery . . . . .	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
Tenement Houses and Stores . . . . .	.	.	.	1	.	.	.	1	1	2	.	.	1	1	.	.	7
Wagon Shed . . . . .	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
	13	15	7	22	94	61	17	7	127	44	62	67	24	99	263	51	973

The following statement will show the number of stories and styles of roofs of the foregoing buildings:—

Ward	Number of Stories.						Style of Roofs.					Total.
	1	2	3	4	5	6	Mans'd.	Flat.	Pitch.	Hip	Gothic.	
	—	—	—	—	—	—	—	—	—	—	—	
1 ..	1	6	6	..	..	..	8	3	2	..	..	13
2 ..	6	1	2	5	1	..	4	9	2	..	..	15
3 ..	..	..	6	1	..	..	2	5	..	..	..	7
4 ..	1	..	5	5	11	..	7	15	..	..	..	22
5 ..	4	1	..	71	18	..	57	29	5	3	..	94
6 ..	1	27	25	8	..	..	60	..	1	..	..	61
7 ..	..	3	12	2	..	..	9	6	2	..	..	17
8 ..	..	..	3	3	1	..	2	5	..	..	..	7
9 ..	5	32	44	44	2	..	108	14	3	1	1	127
10 ..	1	2	21	17	3	..	17	26	..	1	..	44
11 ..	..	43	13	5	1	..	53	9	..	..	..	62
12 ..	4	50	11	1	1	..	46	15	5	1	..	67
13 ..	3	16	3	2	..	..	12	6	4	2	..	24
14 ..	6	60	30	3	..	..	68	23	8	..	..	99
15 ..	3	218	39	2	..	1	255	4	4	..	..	263
16 ..	1	33	10	7	..	..	46	2	2	1	..	51
	36	492	230	176	38	1	754	171	38	9	1	973

WOOD AND FRAME BUILDINGS.

Number of wood and frame buildings erected, or in process of erection under permits issued, 1,051.

Classified as follows : —

BOILER-HOUSE,	.	.	.	.	.	.	1
BOAT-HOUSE,	.	.	.	.	.	.	1
CARRIAGE HOUSES,	.	.	.	.	.	.	18
CHAPELS,	.	.	.	.	.	.	2
COAL AND LUMBER-SHEDS,	.	.	.	.	.	.	13
DWELLINGS,	.	.	.	.	.	.	768
DWELLINGS AND STORES,	.	.	.	.	.	.	46
FOUNDRIES,	.	.	.	.	.	.	2
FREIGHT-HOUSES,	.	.	.	.	.	.	5
GRAIN ELEVATOR,	.	.	.	.	.	.	1
MANUFACTORIES,	.	.	.	.	.	.	14
MECHANICAL,	.	.	.	.	.	.	35
MARKET,	.	.	.	.	.	.	1
PRIVATE SCHOOL-HOUSE,	.	.	.	.	.	.	1
RAILWAY STATIONS,	.	.	.	.	.	.	9
STABLES,	.	.	.	.	.	.	73
STORAGE,	.	.	.	.	.	.	27
STORES AND OFFICES,	.	.	.	.	.	.	20
SHOPS,	.	.	.	.	.	.	3
WAGON SHEDS,	.	.	.	.	.	.	7
MISCELLANEOUS,	.	.	.	.	.	.	4
 Total							1,051

The following statement will show the Wards in which the foregoing buildings are situated and the number in each Ward :—

<i>Wards.</i>	1	3	7	10	11	12	13	14	15	16	<i>Total.</i>
Boiler-house	•	•	•	•	•	•	•	•	•	1	1
Boat-house	•	•	•	•	•	1	•	•	•	•	1
Carriage-houses	3	•	•	•	•	4	1	4	2	4	18
Chapels	1	•	•	•	•	•	•	•	•	1	2
Coal and lumber sheds	3	1	2	3	•	•	•	•	1	3	13
Dwellings	149	•	23	•	•	188	20	87	70	231	768
Dwellings and stores	8	•	2	•	•	14	2	2	9	9	46
Foundries	•	•	•	•	•	1	•	•	1	•	2
Freight houses	4	1	•	•	•	•	•	•	•	•	5
Grain elevator	1	•	•	•	•	•	•	•	•	•	1
Manufactories	7	•	2	•	•	2	•	•	2	1	14
Mechanical	6	•	2	•	1	10	1	3	7	5	35
Market	•	•	•	•	•	1	•	•	•	•	1
Private School-house	1	•	•	•	•	•	•	•	•	•	1
Railway stations	1	•	•	•	•	1	•	•	1	6	9
Stables	6	•	2	1	•	10	3	10	11	30	73
Storage	11	•	2	•	•	4	1	1	5	3	27
Stores and offices	8	•	2	•	1	1	•	2	5	1	20
Shops	3	•	•	•	•	•	•	•	•	•	3
Wagon sheds	2	•	•	•	•	3	1	•	1	•	7
Miscellaneous	1	•	•	•	•	•	•	1	1	1	4
Number in each Ward	215	2	37	4	2	240	29	110	116	296	1,051

The following statement will show the number of stories and styles of roofs of the foregoing buildings :—

Ward.	<i>Number of Stories.</i>			<i>Style of Roof.</i>				<i>Total.</i>
	1	2	3	Mansard.	Flat.	Pitch.	Hip.	
1.....	52	137	26	111	53	49	2	215
2.....	.....	.....	.....	.....	.....	.....	.....	.....
3.....	1	1	.....	.....	2	.....	.....	2
4.....	.....	.....	.....	.....	.....	.....	.....	.....
5.....	.....	.....	.....	.....	.....	.....	.....	.....
6.....	.....	.....	.....	.....	.....	.....	.....	.....
7.....	4	23	10	16	19	2	.....	37
8.....	.....	.....	.....	.....	.....	.....	.....	.....
9.....	.....	.....	.....	.....	.....	.....	.....	.....
10.....	2	3	.....	.....	2	3	.....	5
11.....	.....	1	.....	.....	1	.....	.....	1
12.....	44	155	41	155	66	18	1	240
13.....	10	17	2	12	12	5	.....	29
14.....	32	76	2	58	21	26	5	110
15.....	35	55	23	33	42	33	5	113
16.....	84	211	4	127	22	118	32	299
	264	679	108	512	240	254	45	1,051

SPECIAL PERMITS.

Under the provisions of Chapter 260, Acts of 1872, special permits have been issued for the erection of twenty wooden sheds for storage and mechanical purposes, situated as follows, viz. :—

R E C A P I T U L A T I O N S , E T C .

RECAPITULATION.

Showing the whole number of buildings in each Ward for which permits have been issued.

REPORT OF INSPECTOR OF BUILDINGS.

13

REPAIRS, ALTERATIONS AND ADDITIONS.

Number of permits issued for repairs, alterations, and additions 841

Classified as follows, viz. :—

Repairs and alterations	562
Additions	279
Total	841

The following statement shows the Wards in which the foregoing repairs and alterations were made and additions built :—

Wards.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total.
Repairs and Alterations	50	38	20	85	59	20	50	27	23	21	17	44	17	27	30	34	562
Additions	22	20	8	19	16	12	20	9	14	8	5	24	14	40	33	15	279
	72	58	28	104	75	32	70	36	37	29	22	68	31	67	63	49	841

INSPECTION OF BUILDINGS.

The number of violations, etc., investigated, and reported upon, was 387, as follows :—

Violation of statute	205
" " ordinance	182
Total	387

The following statement shows the nature of these violations :—

Building without permit	23
Chimneys not plastered	62
" on wooden supports	8
Cutting doorways in party walls	2

Dry foundations	4
Erecting wooden building within building limits	15
Exceeding range without brick walls	14
Floor timbers butting in party walls	2
Floors not properly supported	1
Girders not properly supported	2
Improper framing	14
Improperly supporting wall	1
Insufficient foundation	23
Increasing height of wooden buildings	10
Lintel improperly supported	1
No foundations	3
No scuttles	1
Recessing eight-inch party walls	2
Small-sized timber	47
Storing unsafe material	2
Walls not carried through roof	38
“ insecurely tied	1
“ not solidly built	2
“ not thick enough	10
Wooden additions exceeding legal dimensions	3
Woodwork against flues	86
Wooden structures on roofs	2
Woodwork against furnace	1
Minor violations	7
Total	387

UNSAFE BUILDINGS, ETC.

Number of unsafe buildings, etc., examined and reported upon, was 126, as follows:—

Unsafe buildings	60
“ chimneys	46
“ heating apparatus	8
Defective flues	8

Unsafe boilers . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	2
" oven and wall (one each) . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	2
Total . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	126

The following statement will show the number of unsafe buildings, etc., secured or otherwise disposed of:—

	Secured.	Removed.	Rebuilt.	Not completed	Total.
Unsafe Buildings	34	8	4	14	60
" Chimneys	16	...	20	10	46
" Heating apparatus	5	2	...	1	8
" Boilers	1	...	...	1	2
" Oven . . . . .	...	...	1	...	1
" Wall	1	...	...	...	1
Defective Flues	8	...	...	...	8
Total	65	10	25	26	126

RECAPITULATION.

Showing the number of violations, unsafe buildings, etc., in each Ward.

Wards.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total.
Violations of Statutes	4	10	5	22	26	21	5	7	21	10	9	10	9	12	25	9	205
Violations of Ordinances	52	.	.	.	.	.	15	.	.	.	1	33	5	21	19	36	182
Unsafe Buildings	3	4	5	2	6	.	6	6	3	.	1	5	2	15	1	1	60
" Chimneys	1	4	3	9	2	2	7	4	8	1	2	1	.	1	1	.	46
" Heating Apparatus . . . . .	.	.	.	1	2	.	.	.	1	.	1	.	1	1	1	.	8
" Boilers . . . . .	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	2
" Oven . . . . .	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
" Wall . . . . .	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
Defective Flues . . . . .	.	.	.	1	2	.	1	2	1	1	.	.	.	.	.	.	8
Total	60	18	13	36	39	23	34	18	35	12	15	49	17	51	47	46	513

FIRE RECORD.

Number of fires reported on exclusive of the fire of November 9-10, 216.

Estimated damage	\$291,719
" loss by fire of Nov. 9-10.	13,218,850
Total loss for 1872	\$13,510,569

The fire of Nov. 9-10 burned over a territory of about sixty-five acres, containing about 550 estates and 776 buildings. It will be noticed that the estimated loss by the great fire, given above, is less than estimates which have heretofore been made, owing to the fact that while former estimates included all buildings within the line of the fire as a total loss, allowance has been made, in making up the above estimates, for all buildings which were only partially destroyed or slightly damaged.

The probable causes of fire were as follows, viz.:—

Barrels, Hot ashes in	1
Benzine, Explosion of	1
Boiler, Combustible materials near	4
Explosion of	1
Overheating of	1
Sparks from	2
Charcoal furnace, Upsetting of	1
Chimney, Defective	2
Sparks from	1
Timber against	1
Combustion, Spontaneous	5
Fire, Carelessness in the making of	1
Fire crackers,	2
Flues, Defective	16
Forge, Cinders from	1
Sparks from	2

Furnace, Overheated	1
Soldering	1
Furnace funnel, Woodwork near	3
Defective	2
Gas, accidentally, while lighting of	1
Gas burner, Paper ignited by	3
in contact with woodwork	1
Gas pipe, Defective	2
Hot-air pipe, Woodwork near	1
Incendiary	31
Kerosene lamps, Upsetting of	2
Kettle of fat, Overflowing of	1
Lamp, Curtain blowing against	1
Lightning	1
Machinery, Friction of	2
Matches, Children playing with	6
Mice among	1
thrown in basement window	1
in waste paper	1
Oil, Heated	2
Ovens, Overheated	1
Unsafe	1
Pipe, Lighted, in coat pocket	1
Range, Overheated	1
Shoddy picker, Piece of iron in	1
Still, Careless charging of	1
Defective	2
Stoves, Defective.	2
Overheated	5
Melting rosin	1
Sparks from	1
Woodwork near	3
used in drying plastering	1
Stove pipe, Defective	1
Unprotected	1
Woodwork against	3

Unknown	78
Wax and turpentine, Boiling over of	1
Water pipe, Thawing of	4
Ventilator, Range near wooden	1
	<hr/>
	216

The destructive fire of last November, and the fact that the spread of the fire was accelerated by the faulty construction of the buildings in the burnt district, proved the necessity of providing additional building regulations. Referring to the report of the Inspector of Buildings, January 1, 1872, the following quotation will show that this department was sensible of the danger which threatened the city under the old style of building:—

"While it is visionary to suppose that the occurrence of fires will ever be entirely prevented, due precautions should be taken to keep the fire confined to the building in which it originates. This desirable result can never be attained while the present custom continues of loading the roofs and other exposed portions of buildings with woodwork.

"Particularly is this the case with regard to Mansard or French roofs. These roofs, though graceful and pleasing in appearance, and adding greatly to the architectural beauty of our city, are, as now constructed, dangerous in the extreme, being finished and ornamented with wood, in such a manner as to afford the easy communication of fire from one building to another. The same finish and ornamentation can be made of galvanized iron, at a small advance on the cost of wood, and when it is considered that nine-tenths of the buildings now being erected in the building limits are to have Mansard roofs, the necessity of some action with regard to them seems imperative."

In the early part of the year 1872, the committee on this department, consisting of Aldermen William E. Poland and William Sayward, and Councilmen Asa H. Caton, John J.

McNutt and F. M. Hughes, were directed to consider and report what amendments to the building act were required. The committee prepared some amendments, which were submitted to the Legislature, but, for reasons unnecessary to detail, failed to become a law.

Immediately after the fire, the same committee was again called upon to prepare whatever amendments they felt were required to secure the future safety of the city, with the assurance that whatever they presented would be acceptable. Fortunately the committee was composed of practical men and builders of long experience, who well understood the requirements of the city, and who, as builders, would not be likely to approve of any measures which would be onerous or impracticable. They were urged to prepare a few amendments to the old law, to be acted upon at the special session of the Legislature of 1872, leaving the bulk of the bill to be presented in 1873, but having the rejected bill of 1872 as a basis, and a year's experience in the management of the department, they felt that they could prepare a bill which would cover the whole ground and avoid the necessity of again appealing to the Legislature. Accordingly, with the advice and assistance of some of the leading architects in the city, a bill was prepared and presented to the Legislature. Considering the excited state of public feeling at the time, the bill was much less stringent than might have been expected; but the committee, in preparing it, were careful not to incorporate anything which they, as builders, could not stand by.

This law, if carried out, will secure our city from another disaster like that of last November, while, at the same time, it is less stringent in its provisions than the building acts of other cities. As might be expected, the law meets with opposition from some of our builders, and it is doubtful if one could be framed which would meet with their entire approbation. A provision which one builder will condemn as severe and stringent will be approved by another builder of

equally good judgment and reputation. Each builder has his peculiar method of construction, and any change from that method provokes criticism, and oftentimes condemnation, simply because it differs from his idea; while at the same time another builder will approve of any change which will secure a methodical manner of construction, and which will fix a standard alike for all. As all trades and professions disagree in opinions and theories, and in view of the impossibility of reconciling the different opinions, the public safety demands that a fair standard shall be fixed, by which all shall abide. Some of the provisions of the present law might perhaps be safely modified or repealed, but, in the main, it is just what is needed for our city, and should not by any means be permitted to be weakened.

Since the fire, the subjects of building materials, fire-proof construction, methods of extinguishing fires, etc., have received considerable attention, and this department has received numerous communications on these subjects. As far as seen, brick seems to be the only material which withstood the flames. Stone and iron were utterly destroyed by the intense heat, and the action of water caused its complete disintegration. Marble was not fairly tested, the marble front on Washington street, which has been alluded to as having successfully resisted the fire, being protected by a backing of brick which received the full force of the flames. Marble, however, will be extensively used in rebuilding, and of the sixty-eight buildings on the burnt district, for which permits have been granted, thirty-two will have marble fronts. But when exposed to the fury of such a conflagration as that of last November, it matters little of what material a building is composed. Let a fire once get under such headway, and beyond the control of the Fire Department, and a few moments suffice to reduce the building to ashes. Security, therefore, consists not in endeavoring to construct isolated fire-proof buildings, but in so constructing every building

that a fire may be confined to the building in which it originated, even if that is destroyed.

Buildings in process of erection, alteration, or repair have been inspected from time to time, during the year, and reports are made by the Assistant Inspectors daily. The additional number of Assistant Inspectors provided by the City Council will enable the department to exercise a more careful supervision. A glance at the record of violations which have been reported upon will show the necessity of careful inspection, but it is gratifying to be able to report, that these violations have been removed, in most cases, without resorting to legal measures. In one instance it was found necessary to prosecute a builder for not plastering his chimneys, and he was convicted and fined for his offence; and there are now in the hands of the City Solicitor a few cases in which legal proceedings have not yet been commenced. In addition to the daily reports which are received on the progress of buildings, a final report is received upon the completion of each building, and put upon record. This record gives a description of the building, etc., and is often consulted by purchasers and others interested in real estate. A table appended, compiled from this record, will show the number of brick buildings completed during the year.

Early in the year a careful examination was made of the several places of amusement in the city, and the condition of the heating apparatus, etc., inspected. As a general thing, the condition of these places was found very satisfactory, and the few suggestions made to the proprietors were cheerfully complied with.

Much improvement has been made in the construction of wooden buildings during the year. The building ordinance which went into effect January 1st, 1872, specifies the minimum size of timbers, requires proper framing, and the building of suitable foundations. Under its provisions, "balloon" framing has been done away with, and a more substantial

class of buildings erected. The building limits remain unchanged, but during the year a petition has been received from citizens of Ward 7 and 12, supplemented by one from the Presidents of the Insurance Companies, asking that the limits be extended so as to include these Wards. These petitions have been referred to the committee on this department, and doubtless will receive their early consideration. The number of wooden buildings in these Wards is rapidly increasing, permits for 277 having been issued during the year.

A change in the officers of the department was occasioned by the resignation of Assistant Inspector Job T. Souther, and the appointment of Mr. John B. Roys to fill the vacancy. By the resignation of Mr. Souther the city loses the services of a faithful and efficient officer. The large increased amount of work occasioned by the fire necessitate the employment of additional clerical assistance in the office of the department, which it is desirable should be made permanent. It is also very desirable that a surveyor should be attached to the department, for the purpose of giving grades, etc.

The thanks of the department are due to the Metropolitan Board of Works, London, Eng., James M. Macgregor, Sup't of Buildings, New York City, Board of Public Works, Washington, D. C., and the Building Inspectors of Brooklyn and Philadelphia, for copies of building laws, and documents relating to the regulation of buildings.

All of which is respectfully submitted.

DAVID CHAMBERLIN,
Inspector of Buildings.

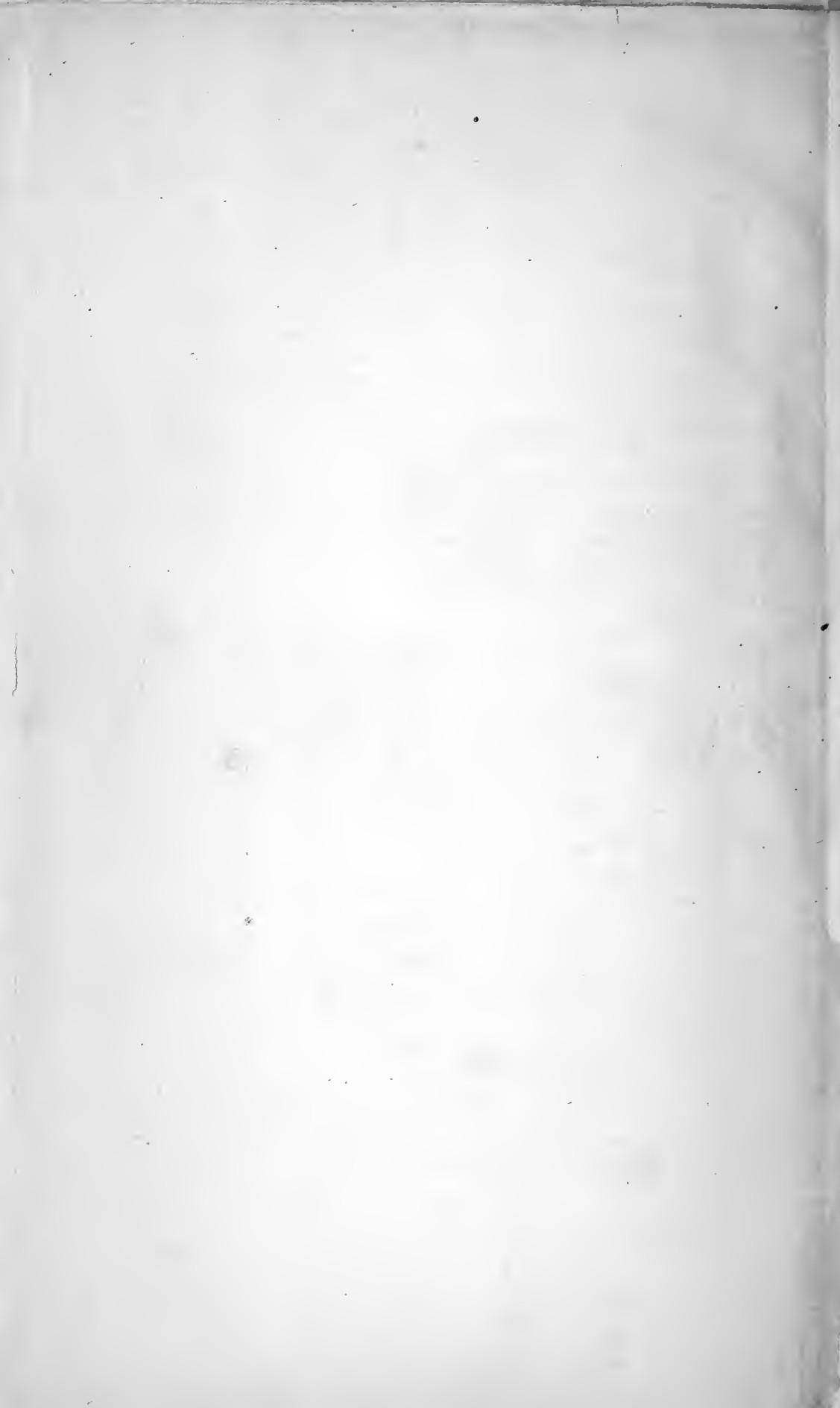


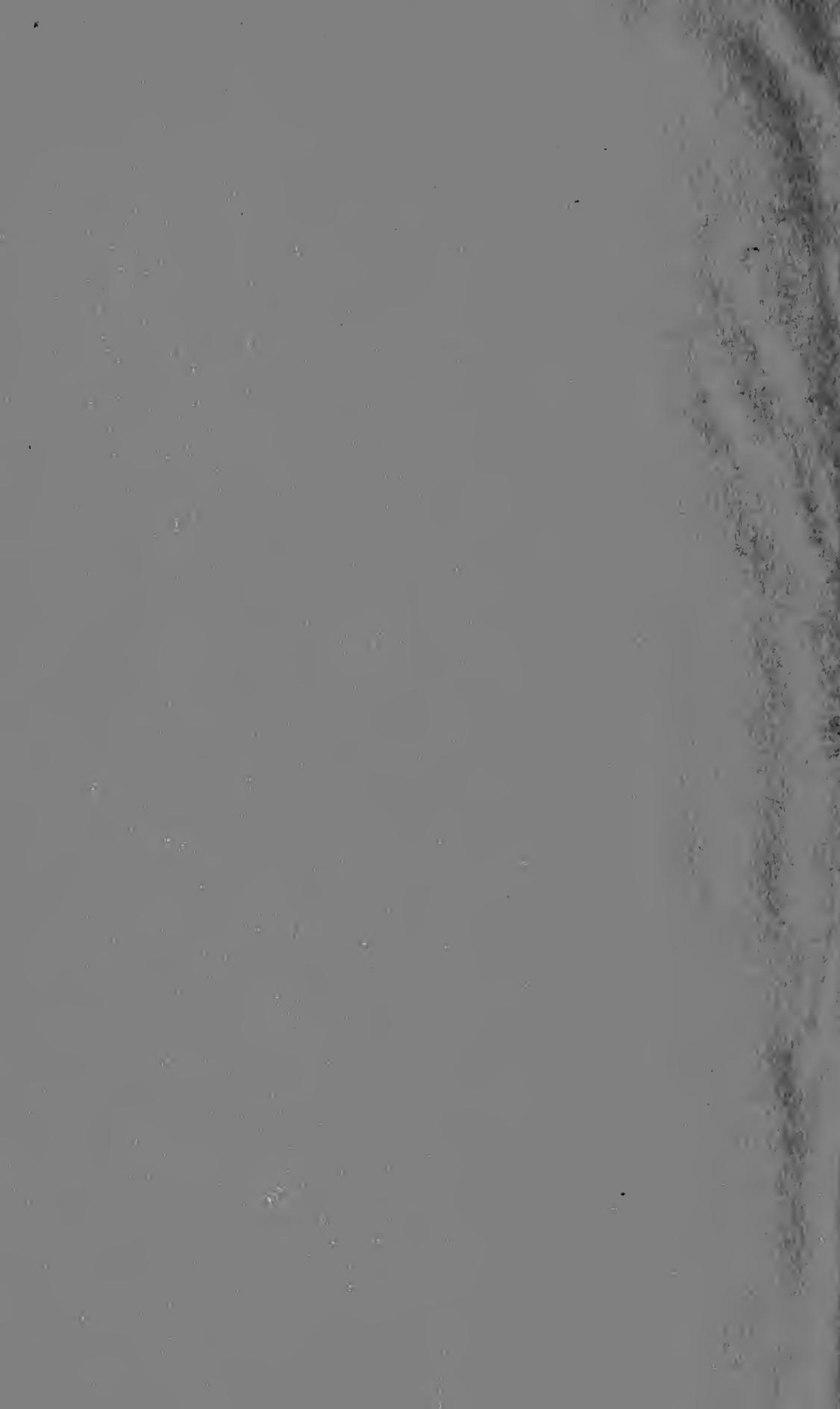
Showing the number of brick and stone buildings completed under permits issued from this Department, from October 1,

T A B L E
to December 31, 1872, together with the number of families accommodated, the number of stores finished, and the estimated cost of the buildings without the land.

Kecapitulation.

WARD	Number of Buildings	Number of Families	Number of Stores	Estimated Cost	WARD	Number of Buildings	Number of Families	Number of Stores	Estimated Cost
1	10	30	6	\$111,000.00	9	48	131	3	\$1,184,000.00
2	10	5	4	87,000.00	10	49	74	15	147,000.00
3	8	11		48,500.00	11	99	144	9	427,000.00
4	6	6	4	167,000.00	12	48	56	..	314,665.00
5	0		9	303,500.00	13	27	77	3	218,000.00
6	10	10		1,042,750.00	14	72	97	8	655,000.00
7	19	39	4	166,100.00	15	184	205	8	1,273,000.00
8	6	29	12	134,000.00	16	45	43	1	266,500.00
<i>Total:</i>		206	897	93					\$7,945,518.00







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